REMARKS

Claim 1 is directed to a process of electrographic printing. A toner comprises a first reagent and a second reagent. A reaction between the first reagent and the second reagent is blocked. After printing, the first reagent and the second reagent are reacted by exposing the printed image to heat to adhere the image to the substrate. Radiation energy is also applied to the image to form a cohesive bond within the image.

Claims 1-20 stand rejected under 35 U.S.C. § 103 as being obvious over Uyttendaele et al. in view of Humnano et al., Urashima et al. and Hal et al. (sic).

Uyttendaele et al. teach a toner that comprises at least one substantially light insensitive silver salt (compound B) and at least one reductant (compound A), wherein compound A and compound B are reacted. Upon reaction, compound A reduces the silver salt to elemental silver. According to Uyttendaele et al., the reductant may be organic compounds containing at least one active hydrogen atom linked to O, N or C.

Uyttendaele et al. teach four modes of operation of the toner or toners. In the first mode and second mode, either compound A or compound B is incorporated in the toner, while the remaining compound, either compound B or compound A, is present on the substrate. In the fourth mode, two different toners are prepared, with compound A present in one toner, and compound B present in the other toner. Only in the third mode of operation are both compound A and

compound B incorporated into the same toner. Uyttendaele et al., column 12, lines 31-65. Uyttendaele et al. give specific examples of the first mode and the second mode of operation, but do not give a specific example of the third mode of operation. Uyttendaele et al., column 14, line 55, et seq.

Uyttendaele et al. do not teach a reactive toner wherein the reaction is blocked. There is no blocking agent that protects the toner by inhibiting a reaction between compound A and compound B. It is not clear from the reading of Uyttendaele et al. how, or why, compound A and compound B would not react. In the third mode, when melt kneading the toner, "it is necessary to use a toner resin able to be melt kneaded at a temperature under 90°C. This necessity restricts heavily the choice of toner resins that are employable." (Col 14, lines 12-16). It is also possible to prepare the toner according to the third mode by a "polymer suspension" process. In this procedure, the temperature can be lower than in a melt kneading process. (Col. 14, lines 17-33). It is apparent that low temperatures are necessary during the processing in order to minimize thermal reaction. Further, Uyttendaele et al. prefer to incorporate an auxiliary reductant in the final substrate when using the third mode, suggesting that the reaction between compound A and compound B alone within the toner does not achieve the desired result. The lack of a specific example of the third mode calls into question the viability of this embodiment as presented in Uyttendaele et al.

Claim 1 of the present application requires a toner, wherein the reaction between the reagents is blocked. Uyttendaele et al. provide no such teaching. Neither Humnano et al. nor Urashima et al. teach a toner wherein a reaction is

blocked. Accordingly, none of the references teach reacting the reagents by the application of heat.

Claim 1 also requires a cohesive bond that is formed within the image by the application of radiation energy. The cited references do not teach the formation of a cohesive bond within the image by the application of radiation.

Neither Humnano et al. nor Urashima et al. teach the use of a toner comprising reagents that react after printing upon a substrate. The reaction of components in the toners of both Humnano et al. nor Urashima et al. occur during the preparation of, or manufacture of, the toner. The fixing process referred to in these references mechanically bonds the printed image to the substrate. There is no application of heat after printing to react the components so that the printed image is bonded to the substrate, nor is radiation applied to the image to form a cohesive bond.

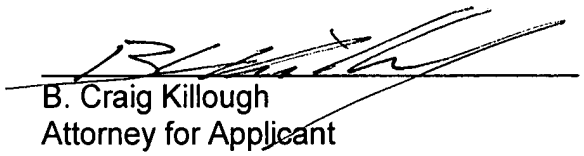
The Official Action refers to Hal et al. The record does not include a reference by this name. It is believed that this reference is to one of the Hale et al. patents cited by the Applicant, and owned by the assignee of the present invention. The Hale et al. patents cited by the Applicant teach the use of sublimation dyes, which are not reactive dyes. As with the other references cited by the Examiner, there is no teaching in any of the cited Hale et al patents that refers to, or suggests, the application of heat after printing to react toner components, so that the printed image is bonded to the substrate. None of eh cited Hale et al patents teach the application of radiation to the image to form a

cohesive bond.

The remaining Claims, 2 through 20, now pending, have in common with Claim 1 the same limitations that are discussed above.

It is respectfully submitted that Claims 1- 20 are in condition for allowance. Review and allowance is earnestly solicited.

Respectfully submitted,



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